

Claims

1. Device for singulating overlapping flat mailings in a path of travel with several singulating sections (4, 5, 6) arranged along the path of travel, with each singulating section (4, 5, 6) having conveyor belts (3) transporting the mailings, and at the opposite side of the path of travel retaining elements (7) acting on the mailings with a friction force and at a height between the conveyor belts (3),

characterized in that

- the speed of travel of the conveyor belts (3) in each singulating section (5, 6) is higher than the speed of travel of the conveyor belts (3) of the singulating section (4,5) upstream in the direction of travel in each case,
- individually mounted deflection rollers (1) of the conveyor belts (3) of both adjacent singulating sections (4, 5 or 5, 6) are arranged at different heights along a common axis (2) at each transition between the singulating sections (4, 5, 6).

2. Device in accordance with claim 1, characterized in that the conveyor belts (3) receiving the mailings have a higher coefficient of friction than the transferring conveyor belts (3) in each case.

3. Device in accordance with claim 1, characterized in that after the receiving conveyor belts (3) in the receiving area the mailings are arranged at vacuum chambers (10) pulling the conveyor belts (3).

4. Device in accordance with claim 1, characterized in that at each transition between the singulating sections (4, 5, 6) the receiving area of the downstream singulating section has one conveyor belt (3) more than the transferring area of the upstream singulating section, that the center singulating sections (5) each have two conveyor belt areas (5a, 5b), with the drive belts (3) being coupled by means of a common wide coupling roller (11) and with the conveyor belt area (5a) receiving the particular mailings having one conveyor belt (3) more than the transferring conveyor belt area (5b) in these singulating sections (5).

5. Device in accordance with claim 1, characterized in that

each singulating section (4, 5, 6) has a measuring device (9) in the receiving area for recording the speed of the mailings.

6. Device in accordance with claim 5, characterized in that the drive motor (12) of the conveyor belt (3) of each of the upstream singulating sections (4, 5) in the direction of travel can be switched off or reduced in speed if the mailing arriving in the downstream singulating section (5, 6) in each case has achieved the speed of the receiving conveyor belt (3), and the switch-off or reduction persists until a clearance between the mailings, specified for each singulating section, has been determined by means of a line of light barriers (13) arranged along the path of travel.

7. Device in accordance with claim 3 and 5, characterized in that additionally the vacuum of the vacuum chamber (10) of each singulating section (4, 5) upstream in the direction of travel can be switched off or reduced if the corresponding mailing arriving in the succeeding singulating section (5, 6) has reached the speed of the receiving conveyor belt (3), and the switch-off and or reduction persists until a clearance between the mailings, specified for each singulating section, is determined by means of a line of light barriers (13) arranged along the path of travel.

8. Device in accordance with claim 1, characterized in that the retaining elements (7) are secured on an immovable belt (7a) running along the length of all singulating sections (4, 5, 6).